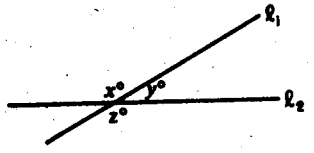
TEST 6 SECT 3

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
1.	1.76×100	0.176×10



2.	$x + y$	$y + z$

One bacterial cell of a certain type is placed in a petri dish. Cells of this type divide once every day.

*3.	The total number of bacterial cells in the dish at the end of 4 days if no cells die	6

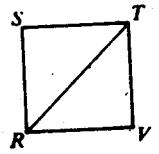
$$5 + \frac{3}{4} = 3 + \frac{x}{4}$$

4.	x	13
5.	$\frac{3}{4} + \frac{4}{5}$	$\frac{3(5) + 4(4)}{4(5)}$

$$-2 < x < 2$$
$$-1 < y < 1$$

6.	x	y

	Column A	Column B



$RSTV$ is a square.

7.	The length of RT	Twice the length of RS

$$r = 2$$
$$s = 1$$

8.	$(r - 3s)^4$	$(r - 3s)^5$

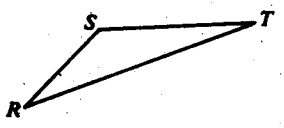
An aviator in Mexico flew 300 kilometers in a straight line due east from point P to point Q and then 400 kilometers in a straight line due north to point R.

9.	The shortest distance from point P to point R	550 kilometers
10.	The number of prime numbers between 10 and 20	The number of prime numbers between 30 and 40

GO ON TO THE NEXT PAGE

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
	$x > 0$	
11.	The number of minutes in $x + 100$ hours	The number of seconds in $60(x + 100)$ minutes
12.	$\sqrt{\frac{5}{2}}$	$\frac{1}{2}\sqrt{10}$



13.	$(RS)^2 + (ST)^2$	$(RT)^2$

	Column A	Column B
	$\sqrt{2x} = 4$ and $y^2 = 64$	
14.	x	y
15.	The length of the diagonal of a square with each side of length 2	The height of a triangle with each side of length 3

GO ON TO THE NEXT PAGE.

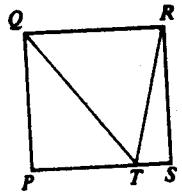
Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. $3 \times \frac{2}{\frac{1}{2}} =$

(A) $\frac{1}{3}$ (B) 1 (C) 3 (D) 6 (E) $6\frac{1}{2}$

17. If $-k = 15$, then $\frac{(k-2)180}{k} =$

(A) 156
(B) 23
(C) −23
(D) −204
(E) −360



18. In the figure above, the area of square $PQRS$ is 64. What is the area of $\triangle QRT$?

(A) 48 (B) 32 (C) 24 (D) 16 (E) 8

19. If x equals 25 percent of a number, then 125 percent of the number is

(A) $\frac{x}{1.25}$ (B) $\frac{x}{4}$ (C) $1.25x$

(D) $4x$ (E) $5x$

20. If the cost of a long-distance phone call is c cents for the first minute and $\frac{2}{3}c$ cents for each additional minute, what is the cost, in cents, of a 10-minute call of this type?

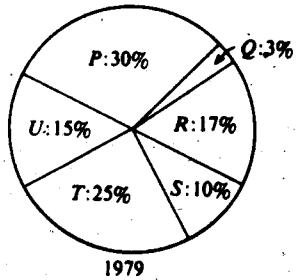
(A) $\frac{5}{3}c$ (B) $6c$ (C) $\frac{20}{3}c$

(D) $7c$ (E) $\frac{23}{3}c$

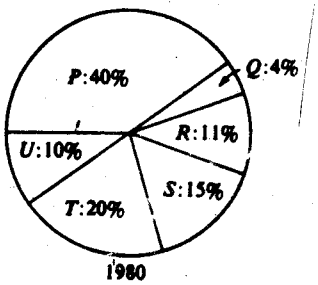
GO ON TO THE NEXT PAGE

Questions 21-25 refer to the following graphs.

PERCENT CONTRIBUTED TO PROFITS BY EACH OF THE 6 DIVISIONS, *P* THRU *U*, OF COMPANY Y FOR 1979 AND 1980



1979
Profits = $20,000,000



1980
Profits = $30,000,000

21. In 1980 what was the average of the amounts contributed to profits by Division *U* and Division *T*?

(A) $1,000,000
(B) $1,500,000
(C) $3,000,000
(D) $4,500,000
(E) $6,500,000

22. Division *R* contributed how much less to the profits of Company *Y* in 1980 than in 1979?

(A) $600,000
(B) $300,000
(C) $180,000
(D) $120,000
(E) $100,000

23. In 1979 the greatest contribution to profits by one of the six divisions was what percent of the least contribution?

(A) 10% (B) 90% (C) 100%
(D) 900% (E) 1,000%

24. If the six divisions are ranked each year according to their dollar contributions to profits, from greatest contribution to lowest, how many divisions ranked lower in 1980 than in 1979?

(A) None
(B) One
(C) Two
(D) Three
(E) Four

25. How many of the divisions contributed more dollars to profits in 1980 than in 1979?

(A) One
(B) Two
(C) Three
(D) Four
(E) Five

GO ON TO THE NEXT PAGE.

26. In a certain apartment building exactly $\frac{1}{3}$ of the apartments have two bedrooms and exactly $\frac{1}{7}$ of the two-bedroom apartments are front apartments. Which of the following could be the total number of apartments in the building?

(A) 42
(B) 50
(C) 51
(D) 56
(E) 57

27. Which of the following could be the area of an isosceles triangle with perimeter 18 and one side of length 8 ?

(A) 6
(B) 12
(C) 14
(D) 16
(E) 18

28. When a certain number is divided by 7, the remainder is 0. If the remainder is not 0 when the number is divided by 14, then the remainder must be

(A) 1 (B) 2 (C) 4 (D) 6 (E) 7

29. If $x > 0$ and $2x - 1 = \frac{1}{2x + 1}$, then $x =$

(A) $\frac{1}{2}$
(B) $\frac{\sqrt{2}}{2}$
(C) 1
(D) $\sqrt{2}$
(E) $\sqrt{2} + 1$

30. If the radius of a circle is decreased by 30 percent, by what percent will the area of the circular region be decreased?

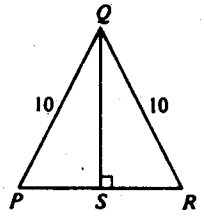
(A) 15%
(B) 49%
(C) 51%
(D) 60%
(E) 90%

TEST 6 SECT 4

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
1.	$2(10^3) + 5(10^2) + 7$	257
	$7n + x = 23$ $n = 3$	
2.	x	n
3.	$\frac{1}{4}$ of 5	$\frac{1}{5}$ of 4
	$0 < x < y$	
4.	$x - y$	$y - x$
5.	The number of bonds that were purchased for \$2,500	The number of bonds that were purchased for \$3,500
6.	The volume of a sphere that has radius 4	The volume of a sphere that has diameter 8
	a, b, and c are consecutive odd integers, not necessarily in that order.	
7.	$a - b$	$b - c$

	Column A	Column B



The length of PR is 12.

8.	The length of QS	8
	$x = -\lvert x \rvert$ $x \neq 0$	
9.	x	0

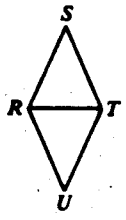
The altitude of a certain triangular sail is 2 meters greater in length than its base. The area of the face of the sail is 24 square meters.

10.	The length of the base of the sail	4 meters

GO ON TO THE NEXT PAGE.

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
11.	$(-1)^{77}(-2)^8$	8



$RS = ST = TU = UR = 10$

12.	RT	13

$\frac{x}{y} = \frac{1}{2}$ and $\frac{y}{z} = \frac{12}{5}$

x, y, and z are positive numbers.

13.	x	z

	Column A	Column B
14.	The area of a circular region with diameter x	The area of a square region with diagonal of length x

On July 1 the ratio of men to women in Club X was 9 to 20. During the month, 2 additional men and 2 additional women joined the club, and no members dropped out.

15.	The ratio of men to women in Club X at the end of July	$\frac{1}{2}$

GO ON TO THE NEXT PAGE.

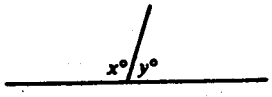
Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. If $x = 3$ is one solution to the equation $x^2 + rx - 20 = 4$, then $r =$

(A) −6
(B) −5
(C) −3
(D) 5
(E) 8

17. If the value of a certain fraction is equal to 0.4 and the denominator of the fraction is 15, then the numerator of the fraction is

(A) 6
(B) 8
(C) 9
(D) 12
(E) 37.5



18. In the figure above, the ratio of x to y is 3 to 2. What is the value of y?

(A) 108 (B) 72 (C) 36 (D) 3 (E) 2

19. What was the original price of an item if a discount of 20 percent reduced the price to $100?

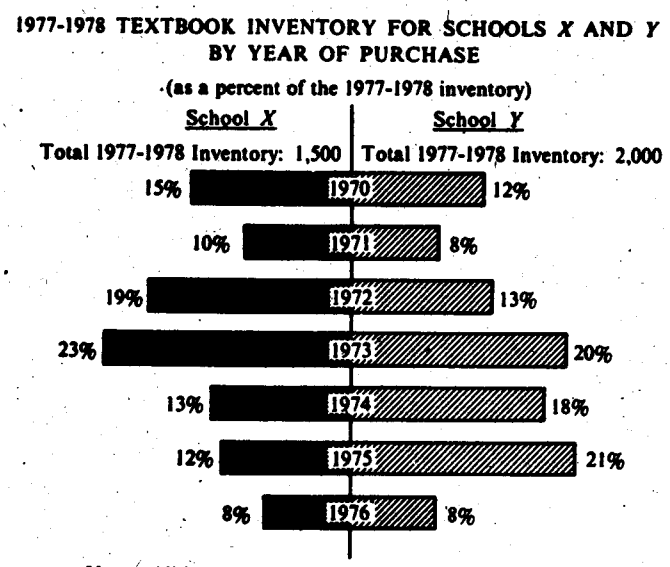
(A) $80
(B) $120
(C) $125
(D) $150
(E) $250

20. The number of connections C that can be made through a switchboard to which T telephones are connected is given by the formula $C = \frac{T(T-1)}{2}$. How many more connections are possible with 30 telephones than with 20 telephones?

(A) 435 (B) 245 (C) 190
(D) 45 (E) 10

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following graph.



Note: All books were purchased new on July 1 of each year.

21. What percent of School *Y*'s 1977-1978 textbook inventory was bought in 1975 ?

(A) 9%
(B) 12%
(C) 21%
(D) 33%
(E) It cannot be determined from the information given.

22. In School *X* how many of the inventoried textbooks were purchased prior to 1976 ?

(A) 100 (B) 120 (C) 140
(D) 1,340 (E) 1,380

23. How many of the inventoried textbooks were purchased by the two schools combined during the years 1974, 1975, and 1976 ?

(A) 495
(B) 940
(C) 1,020
(D) 1,435
(E) 2,800

24. If School *X* purchased 300 textbooks in 1971 and all of these textbooks either were counted in the inventory or had been discarded before the inventory, what percent of these textbooks had been discarded?

(A) 10%
(B) 20%
(C) 50%
(D) 80%
(E) 100%

25. Which of the following statements can be inferred from the graph?

I. School *X* has a smaller enrollment than School *Y*.
II. If the age of a book is the number of years since purchase, then the average (arithmetic mean) age of a book in the School *Y* inventory is less than that of a book in the School *X* inventory.
III. According to the inventory, School *X* and School *Y* purchased the same number of textbooks in 1976.

(A) None (B) I only (C) II only
(D) I and II (E) II and III

GO ON TO THE NEXT PAGE.

26. If $\frac{2}{3}$ of the number of women attending a certain dance is equal to $\frac{1}{2}$ the number of men attending, what fraction of those attending are women?

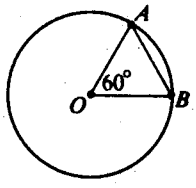
(A) $\frac{2}{5}$

(B) $\frac{3}{7}$

(C) $\frac{5}{7}$

(D) $\frac{3}{4}$

(E) $\frac{5}{6}$



27. In the figure above, O is the center of the circle. If $AB = 10$, what is the area of the circle?

(A) 10π (B) 20π (C) 25π
(D) 50π (E) 100π

28. How many of the positive integers less than 25 are 2 less than an integer multiple of 4 ?

(A) Two
(B) Three
(C) Four
(D) Five
(E) Six

29. If $7x - 4y = -1$ and $5x + 3y = 52$, then $x - y =$

(A) -4
(B) -3
(C) 3
(D) 4
(E) 5

30. The floor of a company's storage room has an area of 20,000 square feet. If the floor is in the shape of a square, approximately how many feet long is each side?

(A) 140 (B) 450 (C) 500
(D) 1,000 (E) 5,000

FOR GENERAL TEST 6 ONLY

Answer Key and Percentages* of Examinees Answering Each Question Correctly

VERBAL ABILITY					
Section 1			Section 2		
Number	Answer	P+	Number	Answer	P+
1	B	82	1	A	89
2	D	59	2	D	75
3	B	54	3	A	67
4	E	56	4	C	60
5	E	52	5	D	69
6	B	32	6	D	50
7	C	29	7	B	52
8	E	90	8	C	83
9	D	84	9	E	89
10	A	40	10	C	48
11	E	80	11	D	72
12	D	53	12	A	50
13	A	47	13	D	31
14	D	35	14	D	54
15	C	27	15	B	31
16	A	16	16	E	24
17	B	55	17	E	83
18	D	35	18	B	57
19	A	63	19	E	81
20	C	67	20	C	59
21	B	54	21	E	72
22	A	58	22	D	40
23	E	59	23	B	66
24	C	62	24	C	50
25	A	55	25	E	62
26	B	65	26	A	70
27	E	33	27	E	16
28	B	91	28	D	94
29	C	84	29	A	87
30	A	84	30	B	83
31	C	72	31	C	51
32	B	49	32	B	53
33	A	51	33	C	45
34	B	31	34	E	45
35	D	40	35	C	42
36	D	29	36	D	34
37	E	24	37	B	32
38	D	23	38	E	10

QUANTITATIVE ABILITY					
Section 3			Section 4		
Number	Answer	P+	Number	Answer	P+
1	A	96	1	A	91
2	C	91	2	B	94
3	A	86	3	A	90
4	B	86	4	B	86
5	C	86	5	D	87
6	D	78	6	C	84
7	B	83	7	D	83
8	A	82	8	C	67
9	B	71	9	B	70
10	A	68	10	A	64
11	B	55	11	C	65
12	C	49	12	D	38
13	D	41	13	A	60
14	D	25	14	A	43
15	A	42	15	D	17
16	C	95	16	D	86
17	A	93	17	A	85
18	B	78	18	B	73
19	E	70	19	C	77
20	D	71	20	B	73
21	D	70	21	C	85
22	E	61	22	E	71
23	E	47	23	D	71
24	C	36	24	C	55
25	D	34	25	C	35
26	A	60	26	B	28
27	B	40	27	E	61
28	E	60	28	E	43
29	B	45	29	A	31
30	C	27	30	A	41

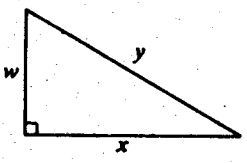
ANALYTICAL ABILITY					
Section 5			Section 6		
Number	Answer	P+	Number	Answer	P+
1	B	91	1	E	91
2	E	83	2	E	38
3	A	94	3	B	75
4	C	86	4	D	93
5	B	81	5	A	79
6	E	69	6	B	59
7	E	64	7	C	57
8	D	85	8	D	93
9	C	77	9	E	75
10	A	73	10	B	47
11	D	87	11	E	67
12	A	45	12	D	70
13	A	67	13	A	42
14	B	54	14	B	65
15	D	82	15	C	55
16	D	41	16	E	71
17	E	37	17	D	28
18	C	37	18	E	33
19	E	32	19	D	37
20	A	28	20	E	13
21	C	50	21	C	38
22	B	46	22	B	38
23	E	37	23	C	80
24	B	49	24	A	44
25	A	31	25	A	80

*Estimated P+ for the group of examinees who took the GRE General Test in a recent three-year period.

TEST 7 SECT 3

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
1.	The average (arithmetic mean) of 10, 20, and 30	The average (arithmetic mean) of 12, 20, and 28



2.	x^2	y^2

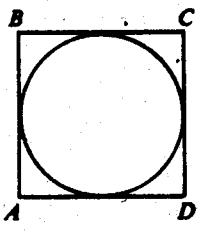
$x = -7$

3.	$7 - x$	$x - 7$
4.	$\frac{\sqrt{60}}{\sqrt{15}}$	4

$x^2 + y^2 = 81$
$x^2 - y^2 = 0$

5.	$x^4 - y^4$	0

	Column A	Column B



The diameter of the inscribed circle is 2.

6.	The perimeter of square *ABCD*	2π

$x > 1$

7.	2^x	x^2

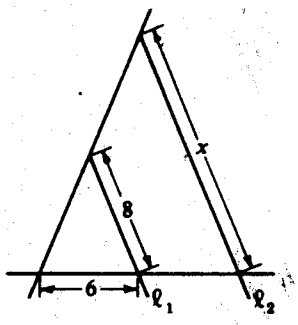
The price of an article of clothing was reduced from \$25 to \$20. The reduced price of the article was then increased by x percent to return it to \$25.

8.	x	20

GO ON TO THE NEXT PAGE.

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B



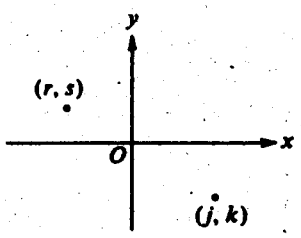
$\ell_1 \parallel \ell_2$

9.	x	14
10.	$4.1 + \frac{1}{3}$	$5.1 - \frac{2}{3}$

$y \neq 5$

11.	$(5 - y)(y - 5)$	0

	Column A	Column B



12.	$s + j$	$r + k$

$\frac{5}{8}, \frac{1}{3}, \frac{4}{7}, \frac{3}{10}$

13.	The greatest of the four fractions given above	The sum of 0.325 and the least of the four fractions given above

14.	x is an integer, and the remainder when $2x$ is divided by 4 is 0.	
	The remainder when x is divided by 4	0

r, s, and t are the radii of three circular regions that have areas R, S, and T, respectively.

$R = 2S$ and $S = 2T$

15.	r	$2t$

GO ON TO THE NEXT PAGE.

Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. If $2x + 3y = 15$ and $y = 1$, then $2x =$

(A) 18 (B) 12 (C) 10 (D) 9 (E) 3

17. If a small juice can contains 200 milliliters of juice, how many liters of juice are there in a case containing 48 small cans? (1 liter = 1,000 milliliters)

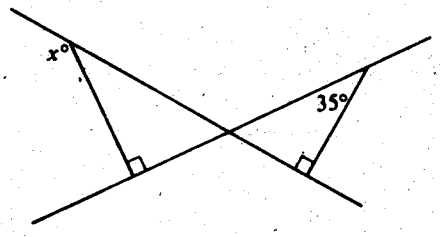
(A) 0.96 (B) 9.6 (C) 96
(D) 960 (E) 9,600

18. If $\frac{32}{x} - 6 = 2$, then $x =$

(A) −8 (B) −4 (C) 4 (D) 6 (E) 8

19. $(3 \times 100) + (4 \times 1) + (5 \times 1{,}000) + (6 \times 10) =$

(A) 3,456
(B) 3,564
(C) 4,635
(D) 5,346
(E) 5,364



20. In the figure above, $x =$

(A) 35 (B) 55 (C) 125
(D) 145 (E) 150

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following data.

SPEED OF WINDS IN THE UNITED STATES

(miles per hour)

Station	Up to and Including 1967 Average	High	Up to and Including 1979 Average	High
Atlanta, Ga.	9.2	70	9.1	70
Boston, Mass.	13.0	65	12.6	65
Buffalo, N.Y.	12.6	91	12.3	91
Chicago, Ill.	10.2	60	10.4	60
Cincinnati, Ohio	7.1	49	7.1	49
Denver, Colo.	9.3	56	9.0	56
Helena, Mont.	7.9	73	7.9	73
Miami, Fla.	9.0	132	9.2	132
Montgomery, Ala.	6.9	60	6.7	72
Mt. Washington, N.H.	35.6	231	35.0	231
New York, N.Y.	9.6	70	9.4	70
Omaha, Nebr.	11.1	73	10.8	109
Pittsburgh, Pa.	9.4	58	9.3	58
Salt Lake City, Utah	8.7	71	8.8	71
San Diego, Calif.	6.5	51	6.7	51
Washington, D.C.	9.5	78	9.3	78

SPEED AND OFFICIAL DESIGNATIONS OF WINDS

Designation	Miles per Hour	Designation	Miles per Hour	Designation	Miles per Hour	Designation	Miles per Hour
Calm	Less than 1	Moderate breeze	13 to 18	Near gale	32 to 38	Storm	55 to 63
Light air	1 to 3	Fresh breeze	19 to 24	Gale	39 to 46	Violent storm	64 to 73
Light breeze	4 to 7	Strong breeze	25 to 31	Strong gale	47 to 54	Hurricane	74 and above
Gentle breeze	8 to 12						

GO ON TO THE NEXT PAGE.

21. Through 1967 what was the ratio of the highest to the average wind speed for Boston, Massachusetts?

(A) 5:1 (B) 6:1 (C) 7:1
(D) 8:1 (E) 9:1

22. For the three places whose average wind speeds through 1979 were the three highest, approximately what was the average (arithmetic mean) of those wind speeds in miles per hour?

(A) 157
(B) 151
(C) 60
(D) 20
(E) 12

23. For how many of the places shown did the highest wind speed change from 1967 to 1979?

(A) One (B) Two (C) Three
(D) Six (E) Fourteen

24. For which of the places shown was the absolute value of the difference between the average wind speed through 1967 and the average wind speed through 1979 greatest?

(A) Boston
(B) Chicago
(C) Mt. Washington
(D) Omaha
(E) San Diego

25. The data infers that, between December 31, 1967 and January 1, 1980, which of the following was true?

I. There was a hurricane wind recorded in Omaha.
II. The average wind speed in Montgomery was 6.8 miles per hour.
III. The wind speed in Chicago was never as high as 60 miles per hour.

(A) I only (B) II only (C) I and III only
(D) II and III only (E) I, II, and III

GO ON TO THE NEXT PAGE.

26. Ricardo lives 4 kilometers due west of Pat's house. Ann lives 6 kilometers due north of Pat's house and 4 kilometers due west of David's house. What is the straight-line distance, in kilometers, from Ricardo's house to David's house?

(A) 4
(B) 5
(C) 8
(D) 10
(E) 12

27. Of the following, which is most nearly equal to $\frac{2}{3}$?

(A) $\frac{3}{4}$ (B) $\frac{5}{6}$ (C) $\frac{7}{9}$ (D) $\frac{11}{15}$ (E) $\frac{15}{21}$

28. If a certain object has been moving at the constant rate of x meters per minute, how many meters has the object moved in the last y seconds?

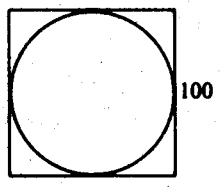
(A) $\frac{xy}{60}$

(B) $\frac{60x}{y}$

(C) $\frac{x}{60y}$

(D) $\frac{60}{xy}$

(E) $60xy$



29. In the figure above, the circle is inscribed in the square. If the square has side of length 100, then the perimeter of the square is approximately how much greater than the circumference of the circle?

(A) 9,686 (B) 2,150 (C) 243
(D) 100 (E) 86

30. One month Mary used $\frac{1}{6}$ of her monthly salary for a car payment and $\frac{1}{4}$ more than the car payment for rent. What fraction of her monthly salary did Mary use that month for the car payment and rent combined?

(A) $\frac{5}{24}$

(B) $\frac{3}{8}$

(C) $\frac{5}{12}$

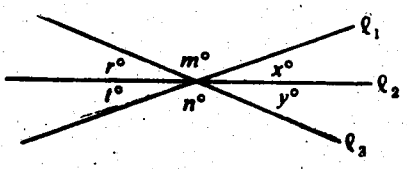
(D) $\frac{1}{2}$

(E) $\frac{7}{12}$

TEST 7 SECT 4

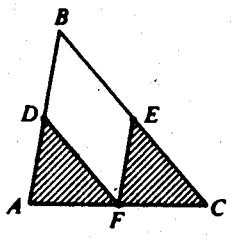
A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
	Maria is 50 inches tall. Her coat weighs 2 pounds.	
1.	The total number of pounds that Maria and her coat weigh	100
	$x + 4 = 10$	
2.	$x - 2$	$\frac{x}{2}$
	x percent of 24 is 12.	
3.	x	50



4.	$m - (x + y)$	$n - (r + t)$
5.	$(-1)^{10}$	$(-1)^{11}$

	Column A	Column B
	$7x^2 = 21$	
6.	x	2



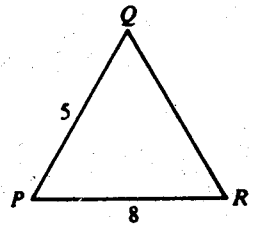
D, E, and F are midpoints of the sides of ΔABC as shown

7.	The sum of the areas of the shaded regions	The area of the region enclosed by quadrilateral $DBEF$
	$b = 2a + 1$	
8.	$2b$	$4a + 1$
	$n = 7 \cdot 19^3$	
9.	The number of distinct positive factors of n	10

GO ON TO THE NEXT PAGE.

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

Column A	Column B



10. QR | 6

$y^2 = x^2 - 1$ and $x \neq 0$.

11. y^4 | $x^4 + 1$

The length of an edge of cube R is 2 and the length of an edge of cube T is 3.

12. The ratio of the surface area of cube R to that of cube T | The ratio of the volume of cube R to that of cube T

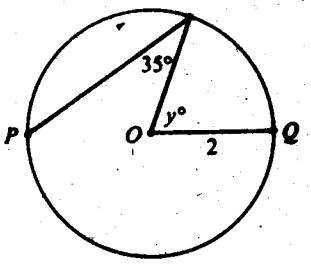
Column A	Column B

Let $\boxed{x} = 3$, if x is an odd integer;

let $\boxed{x} = 6$, if x is an even integer.

r and s are integers, $3r$ is odd, and $5 + s$ is odd.

13. $\boxed{r}$ | $\boxed{s}$



O is the center of the circle. The distance between P and Q is 4.

14. y | 70

$xy = 1$ and $y - x = 0$

y | 1

GO ON TO THE NEXT PAGE.

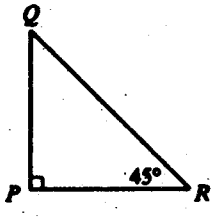
Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. If the sum of two numbers is 14 and their difference is 2, what is the product of the two numbers?

(A) 24
(B) 28
(C) 40
(D) 45
(E) 48

17. A secretary typed 6 letters, each of which had either 1 or 2 pages. If the secretary typed 10 pages in all, how many of the letters had 2 pages?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5



18. If the area of ΔPQR above is 32, what is the length of PR?

(A) 2 (B) 7 (C) 8 (D) 16 (E) 32

19. If $\frac{3}{x} + \frac{4}{3x} = \frac{1}{3}$, then $x =$

(A) 7
(B) 9
(C) 11
(D) 13
(E) 15

20. $\dfrac{\frac{4}{9}+\frac{4}{9}+\frac{4}{9}+\frac{4}{9}+\frac{4}{9}+\frac{4}{9}}{6} =$

(A) $\frac{2}{27}$ (B) $\frac{4}{9}$ (C) $\frac{2}{3}$ (D) $\frac{8}{3}$ (E) 6

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following table.

CONSUMER COMPLAINTS RECEIVED BY THE CIVIL AERONAUTICS BOARD

Category	1980 (percent)	1981 (percent)
Flight problems	20.0%	22.1%
Baggage	18.3	21.8
Customer service	13.1	11.3
Oversales of seats	10.5	11.8
Refund problems	10.1	8.1
Fares	6.4	6.0
Reservations and ticketing	5.8	5.6
Tours	3.3	2.3
Smoking	3.2	2.9
Advertising	1.2	1.1
Credit	1.0	0.8
Special passengers	0.9	0.9
Other	6.2	5.3
	100.0%	100.0%
Total Number of Complaints	22,988	13,278

21. Approximately how many complaints concerning Credit were received by the Civil Aeronautics Board in 1980 ?

(A) 133 (B) 220 (C) 230
(D) 1,330 (E) 2,300

22. By approximately what percent did the total number of complaints decrease from 1980 to 1981 ?

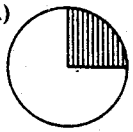
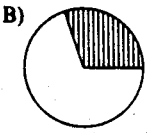
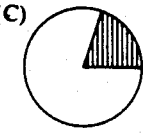
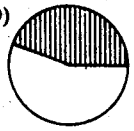
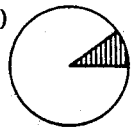
(A) 40%
(B) 60%
(C) 75%
(D) 100%
(E) 175%

GO ON TO THE NEXT PAGE.

23. If the categories, except "Other," are ranked by percent of complaints from greatest to least, for how many of the categories would the rank change from 1980 to 1981 ?

(A) Three (B) Four (C) Six
(D) Seven (E) Eight

24. If the circle graphs below (drawn to scale) represent total consumer complaints for 1980, which graph shows a shaded sector that corresponds to Flight problems and Refund problems combined?

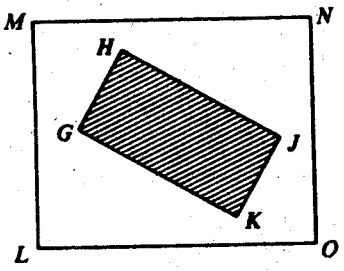
(A) 
(B) 
(C) 
(D) 
(E) 

25. Which of the following statements can be inferred from the table?

I. In 1980 and in 1981, complaints about Flight problems, Baggage, and Customer service together accounted for more than 50 percent of all consumer complaints received by the Civil Aeronautics Board.
II. The number of Special passenger complaints was unchanged from 1980 to 1981.
III. From 1980 to 1981 the number of Flight problem complaints increased by more than 2 percent.

(A) I only
(B) II only
(C) I and II only
(D) I and III only
(E) I, II, and III

GO ON TO THE NEXT PAGE.



26. In the figure above, $LMNO$ and $GHJK$ are rectangles where $GH = \frac{1}{2}LM$ and $HJ = \frac{1}{2}MN$. What fraction of the region bounded by $LMNO$ is NOT shaded?

(A) $\frac{1}{4}$ (B) $\frac{1}{3}$ (C) $\frac{1}{2}$ (D) $\frac{2}{3}$ (E) $\frac{3}{4}$

27. At 9:00 a.m. train T left the train station and two hours later train S left the same station on a parallel track. If train T averaged 60 kilometers per hour and train S averaged 75 kilometers per hour until S passed T, at what time did S pass T?

(A) 2:00 p.m.
(B) 5:00 p.m.
(C) 6:00 p.m.
(D) 7:00 p.m.
(E) 9:00 p.m.

28. By weight, liquid A makes up 7.0 percent of solution I and 14.5 percent of solution II. If 3 grams of solution I is mixed with 2 grams of solution II, then liquid A accounts for what percent of the weight of the resulting solution?

(A) 6.09% (B) 10% (C) 10.75%
(D) 21.5% (E) 50%

29. The volume of a cylindrical tank is directly proportional to the height and the square of the radius of the tank. If a certain tank with a radius of 10 centimeters has a volume of 20,000 cubic centimeters, what is the volume, in cubic centimeters, of a tank of the same height with a radius of 15 centimeters?

(A) 300,000
(B) 45,000
(C) 30,000
(D) 15,000
(E) 4,500

30. If $y = \frac{a}{a+b}$ and $x = \frac{a}{b}$, what is y in terms of x?

(A) $-\frac{1}{x}$

(B) $1 + x$

(C) $1 + \frac{1}{x}$

(D) $\frac{1}{1+x}$

(E) $\frac{x}{1+x}$

FOR GENERAL TEST 7 ONLY

Answer Key and Percentages* of Examinees Answering Each Question Correctly

VERBAL ABILITY					
Section 1			Section 2		
Number	Answer	P+	Number	Answer	P+
1	E	63	1	A	87
2	A	68	2	D	75
3	B	67	3	E	70
4	C	62	4	D	59
5	A	58	5	E	60
6	D	57	6	B	40
7	B	51	7	C	21
8	D	90	8	B	94
9	C	91	9	C	86
10	C	80	10	C	51
11	C	45	11	B	48
12	B	32	12	D	50
13	B	46	13	A	45
14	D	36	14	C	30
15	B	40	15	C	32
16	A	21	16	A	15
17	E	54	17	A	83
18	D	52	18	E	48
19	C	62	19	C	51
20	E	74	20	C	63
21	E	66	21	D	66
22	B	72	22	D	23
23	D	49	23	D	52
24	A	30	24	A	53
25	E	39	25	E	58
26	A	44	26	E	52
27	A	35	27	B	59
28	B	84	28	E	90
29	D	77	29	D	81
30	C	82	30	E	79
31	B	82	31	D	78
32	E	74	32	A	53
33	D	52	33	C	47
34	E	45	34	B	33
35	B	36	35	E	41
36	E	27	36	D	32
37	A	21	37	B	31
38	C	33	38	E	26

QUANTITATIVE ABILITY					
Section 3			Section 4		
Number	Answer	P+	Number	Answer	P+
1	C	90	1	D	93
2	B	85	2	A	90
3	A	86	3	C	88
4	B	81	4	C	89
5	C	72	5	A	84
6	A	75	6	B	84
7	D	68	7	C	71
8	A	56	8	A	73
9	D	64	9	B	59
10	C	53	10	D	59
11	B	46	11	B	57
12	A	36	12	A	44
13	C	42	13	B	33
14	D	28	14	C	40
15	C	27	15	D	25
16	B	92	16	E	86
17	B	84	17	D	79
18	C	87	18	C	76
19	E	96	19	D	64
20	D	80	20	B	73
21	A	87	21	C	80
22	D	62	22	A	68
23	B	89	23	C	30
24	C	66	24	B	71
25	A	48	25	A	17
26	D	55	26	E	57
27	E	50	27	D	32
28	A	48	28	B	34
29	E	47	29	B	41
30	B	27	30	E	33

ANALYTICAL ABILITY					
Section 5			Section 6		
Number	Answer	P+	Number	Answer	P+
1	A	86	1	C	65
2	C	72	2	D	52
3	E	41	3	C	87
4	B	89	4	B	58
5	D	73	5	D	86
6	C	54	6	E	91
7	B	84	7	A	81
8	C	57	8	D	75
9	B	59	9	D	54
10	E	51	10	E	77
11	A	42	11	E	62
12	D	42	12	B	80
13	E	67	13	A	57
14	A	57	14	C	67
15	B	44	15	E	24
16	D	42	16	D	51
17	A	36	17	E	39
18	D	32	18	A	44
19	E	16	19	D	52
20	A	16	20	A	18
21	C	35	21	C	32
22	D	17	22	E	28
23	C	57	23	A	45
24	A	32	24	B	42
25	B	34	25	A	32

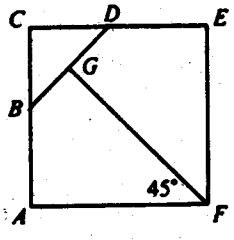
*Estimated P+ for the group of examinees who took the GRE General Test in a recent three-year period.

TEST 8 SECT. 2

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
	A team won 75 percent of the 24 games it played.	
1.	The number of games the team won	20
2.	$(4)(10^5)$	400,000
	$rt = 0$ $t \neq 0$	
3.	r	0
4.	$8 - (-12) - 5$	$5 + (-8) + 12$
	Seven cars were used to transport the members of a chess team to their match, and each car contained either 4 team members or 3 team members.	
5.	The total number of members on the chess team	25

	Column A	Column B
6.	$\sqrt{41} + \sqrt{59}$	10
	$2x + 5y = 24$ $1 \leq x \leq 3$	
7.	x	y
	$x > 0$	
8.	$x + 1$	x^2



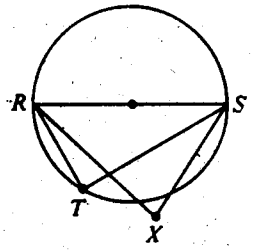
$ACEF$ is a square.
The area of triangular region BCD is 1.

9. The area of region $ABGF$ 3.5

GO ON TO THE NEXT PAGE.

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

Column A	Column B
10. The area of a rectangular region with sides of lengths 25 and 3.1	The area of a circular region with radius 5
11. The ratio of the lesser of two consecutive positive integers to the greater	$\frac{2}{3}$



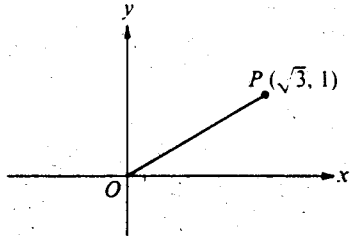
RS is a diameter of the circle.

12. The measure of $\angle RTS$	The measure of $\angle RXS$

$$x + y = 2$$
$$xy = -3$$

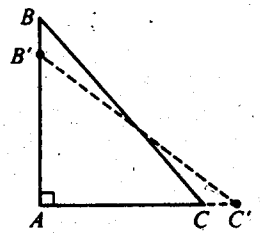
13. $(x - y)^2$	16

Column A	Column B



In the rectangular coordinate system, segment OP is rotated counterclockwise through an angle of 90° to position OQ (not shown).

14. The x-coordinate of point Q	-1



Triangular garden ABC is redesigned by increasing the length of AC by 20 percent to point C' and decreasing the length of AB by 20 percent to point B'.

15. The area of the original garden ABC	The area of the redesigned garden $AB'C'$

GO ON TO THE NEXT PAGE.

Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. $\dfrac{\frac{1}{3}+\frac{1}{4}}{\frac{1}{3}-\frac{1}{4}} =$

(A) 0

(B) $\frac{1}{7}$

(C) $\frac{1}{2}$

(D) 1

(E) 7

17. A train travels 60 miles per hour for 3 hours and then 45 miles per hour for 2 hours. What is the train's average speed in miles per hour during the 5-hour period?

(A) 55

(B) 54

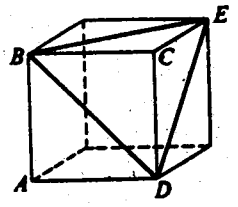
(C) $52\frac{1}{2}$

(D) 51

(E) 50

18. If $4x$ is 9 greater than the sum of x and $3y$, then x is how much greater than y?

(A) 3
(B) 6
(C) 9
(D) 12
(E) 15



19. Each edge of the cube shown above has length s. What is the perimeter of $\triangle BDE$?

(A) $3s$

(B) $6s$

(C) $\frac{s\sqrt{3}}{2}$

(D) $3s\sqrt{2}$

(E) $2s + s\sqrt{2}$

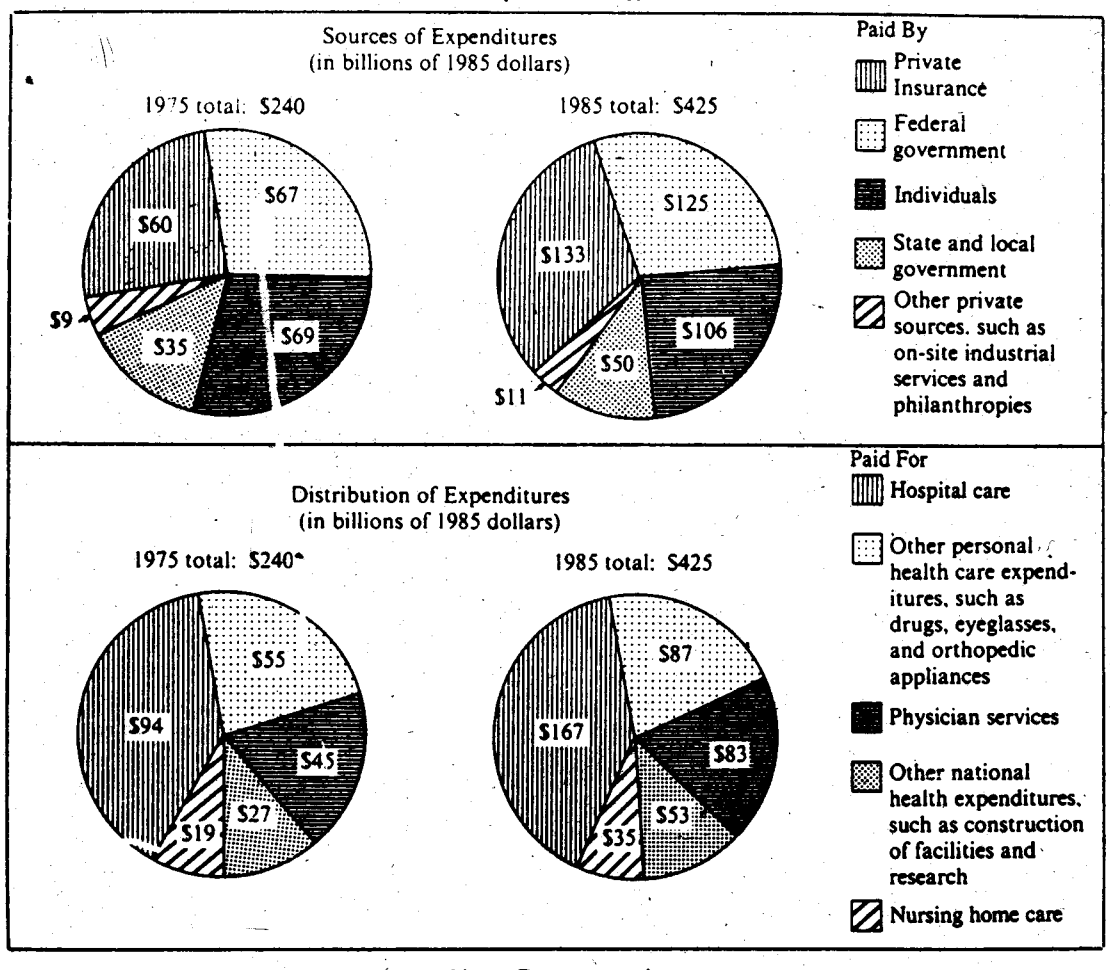
20. If the perimeter of a triangle is 18, then the length of one of the sides CANNOT be

(A) 1 (B) 3 (C) 6 (D) 8 (E) 9

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following graphs. All references to "dollars" in these questions are the 1985 dollars referred to in the graphs.

TOTAL EXPENDITURES FOR MEDICAL CARE IN THE UNITED STATES
1975 AND 1985



Note: Drawn to scale.

GO ON TO THE NEXT PAGE.

21. The category that accounted for $27 billion of the distribution of medical expenditures in 1975 accounted for how many billion dollars of the distribution of medical expenditures in 1985 ?

(A) 19
(B) 22
(C) 30
(D) 35
(E) 53

22. In 1985 the amount of medical expenditures paid by the federal government was how many times the amount paid by state and local government?

(A) $1\frac{1}{4}$

(B) $1\frac{3}{4}$

(C) $2\frac{1}{4}$

(D) $2\frac{1}{2}$

(E) $2\frac{3}{4}$

23. In 1985 approximately what percent of all medical expenditures was paid for physician services?

(A) 20%
(B) 25%
(C) 30%
(D) 35%
(E) 40%

24. The percent of total medical expenditures paid by private insurance in 1975 was most nearly equal to the percent of total medical expenditures paid by which of the following in 1985 ?

(A) Private insurance
(B) Federal government
(C) Individuals
(D) State and local government
(E) Other private sources

25. What was the approximate percent increase in total medical expenditures from 1975 to 1985 ?

(A) 44%
(B) 77%
(C) 85%
(D) 88%
(E) 135%

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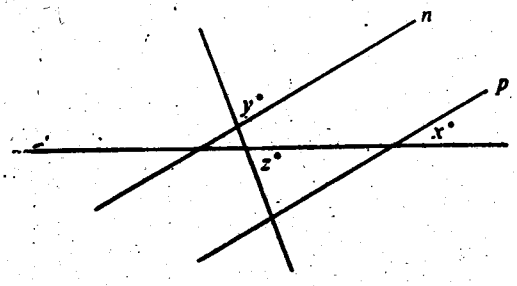
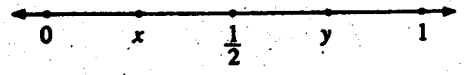


26. In the figure above, $n \parallel p$. If $x = 30$ and $y = 80$, what is the value of z?

(A) 70 (B) 65 (C) 60 (D) 55 (E) 50

27. Of the following, which is the closest approximation to $\sqrt{\frac{(97.942)(0.261)}{(0.51)^2}}$?

(A) 1
(B) 5
(C) 10
(D) 20
(E) 100



28. If x and y lie on the number line shown above, which of the following statements must be true?

(A) $\frac{1}{y} > 2$

(B) $\frac{1}{x} < 2$

(C) $\frac{1}{x} < \frac{1}{y}$

(D) $x + y < 1$

(E) $xy < \frac{1}{2}$

29. If the product of five integers is an odd integer, exactly how many of the five must be odd?

(A) One (B) Two (C) Three
(D) Four (E) Five

30. One-kth of a circular pie has been served. If the rest of the pie is divided into n equal servings, then each of these servings is what fraction of the whole pie?

(A) $\frac{1}{nk}$

(B) $\frac{k-n}{nk}$

(C) $\frac{1}{n-k}$

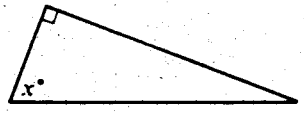
(D) $\frac{k-1}{nk}$

(E) $\frac{k-1}{n}$

TEST 8 SECT 6

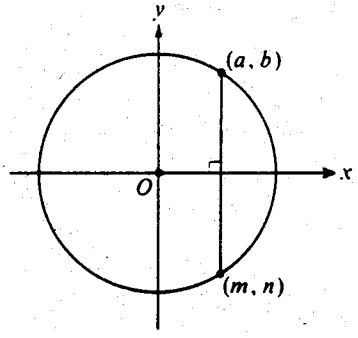
A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
1.	$(-1)^6$	$(-1)^7$
	$x > 2$ and $z > 2$	
2.	$\frac{2}{x}$	$\frac{z}{2}$
3.	$25(26) + 26(75)$	2,500
	$\sqrt{x^2 + 1} = 5$	
4.	x	5



5.	x	60

	Column A	Column B
6.	The average (arithmetic mean) of 5 numbers, each less than 7 and greater than 6	The average (arithmetic mean) of 7 numbers, each less than 6 and greater than 5
	s and t are positive numbers. $s > \frac{t}{3}$	
7.	s	t



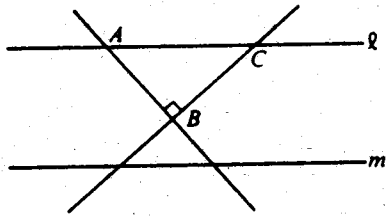
Point O is the center of the circle in the rectangular coordinate system.

8.	$a + b$	$m + n$

GO ON TO THE NEXT PAGE.

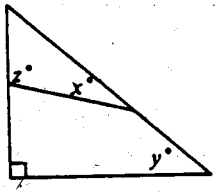
A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
	n and r are positive integers such that $4^n = 2^{r+1}$	
9.	r	$2n - 1$



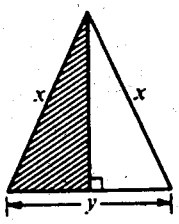
Lines ℓ and m are parallel.

10.	AB	BC



11.	$x + z$	$90 + y$

	Column A	Column B
	Last year retail sales in Country M totaled x dollars, and the retail sales of the 5 largest retailers in Country M accounted for 75 percent of this total.	
12.	The average (arithmetic mean) retail sales for the 5 largest retailers in Country M last year	$\frac{3x}{20}$ dollars



13.	The area of the shaded region	$\frac{xy}{4}$
	A K-number is a positive integer with the special property that 3 times its units' digit is equal to 2 times its tens' digit.	
14.	The number of K-numbers between 10 and 99	3
	In an election each voter voted for one of two candidates, X and Y. The number of votes that Candidate X received was $\frac{1}{3}$ more than the number of votes that Candidate Y received.	
15.	The fraction of the total vote that Candidate X received	$\frac{4}{7}$

GO ON TO THE NEXT PAGE.

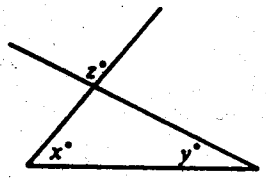
Directions: Each of the **Questions 16-30** has five answer choices. For each of these questions, select the best of the answer choices given.

16. If integer x were divided by 7, the quotient would be 12 with a remainder of 1. Therefore, x equals

(A) 91 (B) 90 (C) 88 (D) 85 (E) 83

17. If $y \neq 0$ and $2x + y = 12$, then which of the following is NOT a possible value of x?

(A) 12
(B) 10
(C) 8
(D) 6
(E) 4



18. In the figure above, what is $x + y$ in terms of z?

(A) $180 - z$
(B) $180 + z$
(C) $z - 180$
(D) $z + 180$
(E) z

19. If $4x + 3y = 8$ and $\frac{x}{2} = \frac{1}{4}$, what is the value of y?

(A) $\frac{4}{3}$
(B) 2
(C) $\frac{7}{3}$
(D) 3
(E) $\frac{10}{3}$

20. Two people were hired to mow a lawn for a total of \$45. They completed the job with one person working for 1 hour and 20 minutes and the other working 40 minutes. If they split the \$45 in proportion to the amount of time each spent working on the job, how much did the person who worked longer receive?

(A) \$33.75
(B) \$30.00
(C) \$27.50
(D) \$25.00
(E) \$22.50

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following table.

NUMBER OF MOTOR VEHICLES IN FIVE COUNTRIES
1983 AND 1985

	Number of Motor Vehicles			
	1983		1985	
Country	Per Square Mile	Per 1,000 Population	Per Square Kilometer*	Per 1,000 Population
A	109	182	49	206
B	60	243	23	252
C	54	123	29	167
D	109	190	49	220
E	23	447	9	453

*1 square mile = 2.6 square kilometers

21. If in 1983 the total area of Country *B* was 95,000 square miles, how many million motor vehicles did it have?

(A) 1.6
(B) 2.2
(C) 4.1
(D) 5.7
(E) 6.3

22. In 1985 Country *D* had approximately how many motor vehicles per square mile?

(A) 190
(B) 125
(C) 110
(D) 50
(E) 35

23. In 1983 the number of motor vehicles per square mile for Country *E* was approximately what percent of the number of motor vehicles per square mile for Country *A*?

(A) 18%
(B) 21%
(C) 27%
(D) 33%
(E) 47%

24. If the population of Country *D* in 1983 was 80 million, then the number of motor vehicles in that country was how many million?

(A) 15.2
(B) 16.5
(C) 17.0
(D) 17.6
(E) 18.1

25. In 1985 the number of square kilometers per 100 motor vehicles in Country *C* was approximately

(A) 0.29
(B) 0.34
(C) 1.34
(D) 2.90
(E) 3.45

GO ON TO THE NEXT PAGE.

26. If 5 percent of a rectangular lot is covered by a rectangular shed that is 25 feet long and 24 feet wide, what is the area of the lot in square feet?

(A) 3,000
(B) 5,700
(C) 12,000
(D) 22,500
(E) 30,000

27. For $x \neq 2$ and $x \neq 3$, $\frac{-2}{x-2} + \frac{x}{x-3} =$

(A) 1

(B) $\frac{1}{x-3}$

(C) $\frac{x-2}{2x-5}$

(D) $\frac{-2x}{(x-2)(x-3)}$

(E) $\frac{x^2-4x+6}{(x-2)(x-3)}$

28. A circular region has circumference c inches and area k square inches. If $c = 3k$, what is the radius of the circle in inches?

(A) $\frac{\sqrt{2}}{3}$

(B) $\sqrt{\frac{2}{3}}$

(C) $\frac{2}{3}$

(D) $\frac{4\pi}{9}$

(E) $\frac{2\pi}{3}$

29. In a certain country, a person is born every 3 seconds and a person dies every 10 seconds. Therefore, the birth and death rates account for a population growth rate of one person every

(A) $3\frac{1}{3}$ sec

(B) $4\frac{2}{7}$ sec

(C) 7 sec

(D) $11\frac{2}{3}$ sec

(E) 13 sec

30. If r and s are positive integers, each greater than 1, and if $11(s-1) = 13(r-1)$, what is the least possible value of $r + s$?

(A) 2
(B) 11
(C) 22
(D) 24
(E) 26

FOR GENERAL TEST 8 ONLY

Answer Key and Percentages* of Examinees Answering Each Question Correctly

VERBAL ABILITY

Section 1			Section 5		
Number	Answer	P+	Number	Answer	P+
1	B	94	1	D	94
2	A	94	2	A	93
3	A	71	3	B	80
4	C	84	4	C	56
5	E	55	5	D	78
6	D	43	6	D	40
7	E	53	7	E	15
8	A	90	8	D	93
9	A	79	9	B	84
10	D	69	10	D	90
11	B	59	11	C	61
12	D	44	12	E	58
13	B	41	13	A	53
14	D	31	14	B	38
15	D	27	15	C	29
16	E	27	16	E	19
17	A	92	17	C	86
18	C	53	18	B	49
19	C	34	19	A	88
20	C	84	20	B	54
21	B	58	21	D	27
22	A	68	22	C	47
23	B	81	23	C	71
24	C	59	24	D	81
25	E	49	25	E	40
26	A	34	26	A	58
27	E	23	27	D	32
28	C	87	28	A	92
29	E	84	29	B	93
30	E	60	30	E	82
31	D	75	31	C	68
32	C	76	32	A	64
33	E	58	33	C	57
34	B	37	34	A	33
35	B	45	35	E	40
36	E	37	36	E	37
37	D	26	37	C	25
38	A	20	38	D	29

QUANTITATIVE ABILITY

Section 2			Section 6		
Number	Answer	P+	Number	Answer	P+
1	B	93	1	A	91
2	C	83	2	B	82
3	C	83	3	A	82
4	A	87	4	B	74
5	D	89	5	D	68
6	A	78	6	A	77
7	B	77	7	D	70
8	D	74	8	A	61
9	D	56	9	C	46
10	B	60	10	D	47
11	D	68	11	C	49
12	A	38	12	C	35
13	C	47	13	B	26
14	C	27	14	C	37
15	A	20	15	C	26
16	E	81	16	D	93
17	B	80	17	D	81
18	A	63	18	A	80
19	D	57	19	B	75
20	E	49	20	B	70
21	E	92	21	D	70
22	D	71	22	B	56
23	A	71	23	B	66
24	C	55	24	A	56
25	B	37	25	E	34
26	A	62	26	C	57
27	C	44	27	E	45
28	E	41	28	C	40
29	E	32	29	B	32
30	D	27	30	E	15

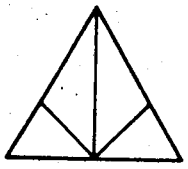
ANALYTICAL ABILITY

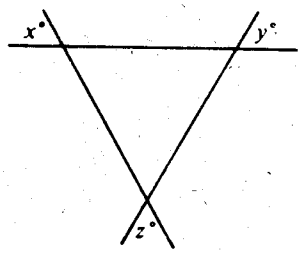
Section 3			Section 7		
Number	Answer	P+	Number	Answer	P+
1	E	91	1	E	80
2	B	80	2	C	77
3	D	90	3	E	72
4	D	77	4	A	62
5	E	79	5	D	61
6	C	68	6	C	51
7	A	69	7	B	79
8	C	81	8	B	67
9	D	57	9	A	83
10	D	78	10	C	81
11	A	61	11	E	86
12	D	64	12	D	82
13	B	77	13	B	64
14	A	70	14	B	46
15	E	82	15	E	50
16	C	53	16	C	49
17	B	35	17	A	44
18	A	49	18	D	52
19	D	32	19	B	55
20	A	63	20	D	28
21	E	46	21	E	25
22	E	31	22	E	18
23	B	44	23	D	63
24	B	59	24	D	73
25	B	41	25	C	59

*Estimated P+ for the group of examinees who took the GRE General Test in a recent three-year period.

TEST 9 SECT 3

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

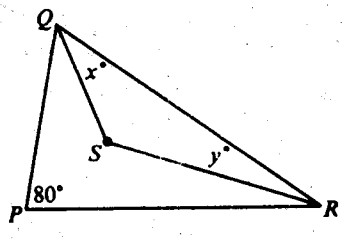
	Column A	Column B
	A hardware store purchased identical snow shovels at a cost of \$9 apiece and sold each of them for 20 percent above cost.	
1.	The price at which the hardware store sold each shovel	\$10.80
	$n + \frac{2}{5} = 5 + \frac{7}{5}$	
2.	n	$6\frac{4}{5}$
	$x < 0$	
3.	$x - 1$	$1 - x$
		
4.	The total number of triangles shown above	6
5.	3^4	4^3
	$x + k = 8$ $x - k = 4$	
6.	x	k

	Column A	Column B
	Carol is c centimeters tall, and Diane is d centimeters shorter than Carol. $(d > 0)$	
7.	The sum of Carol's height and Diane's height	$2c$ centimeters
		
8.	$x + y + z$	150
	$n = 105.873$	
9.	$\frac{n \times 10^3}{10^5}$	

GO ON TO THE NEXT PAGE.

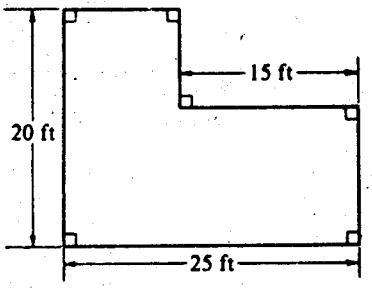
A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

Column A	Column B



Segment QS bisects $\angle PQR$ and segment RS bisects $\angle PRQ$.

10.	x	y



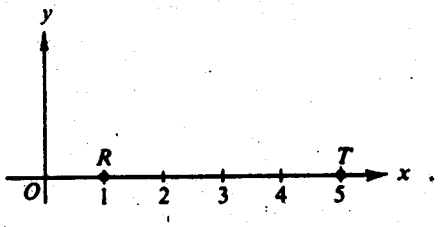
The figure represents the floor of a certain room.

11.	The area of the floor	350 square feet

Column A	Column B

$x^2 - 3x + 2 = 0$

12.	Twice the sum of the roots of the equation	6



Point S (not shown) lies above the x-axis such that $\triangle RST$ has area equal to 6.

13.	The x-coordinate of point S	The y-coordinate of point S

14.	$\frac{10^5}{5^3}$	$2^5 \cdot 5^2$

$rs \neq 0$

15.	$(r + s)^2$	$r^2 + s^2$

GO ON TO THE NEXT PAGE.

Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. If $9x - 3 = 15$, then $3x - 1 =$

(A) $\frac{5}{3}$

(B) 3

(C) 5

(D) 6

(E) 45

17. If the sum of 12, 15, and x is 45, then the product of 5 and $(x + 2)$ is

(A) 100
(B) 92
(C) 80
(D) 41
(E) 25

18. If the average (arithmetic mean) of two numbers is 20 and one of the numbers is x, what is the other number in terms of x?

(A) $40 - x$
(B) $40 - 2x$
(C) $20 + x$
(D) $20 - x$
(E) $20 - 2x$

19. $\frac{1}{\frac{1}{2}} + \frac{2}{\frac{2}{3}} + \frac{3}{\frac{3}{4}} =$

(A) $\frac{1}{9}$

(B) $\frac{13}{12}$

(C) $\frac{29}{12}$

(D) 8

(E) 9

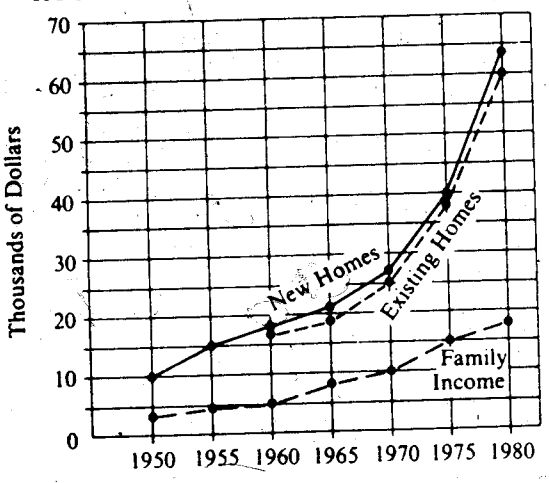
20. What is the area of a circular region that has circumference 8π?

(A) 4π
(B) 8π
(C) 16π
(D) 32π
(E) 64π

GO ON TO THE NEXT PAGE.

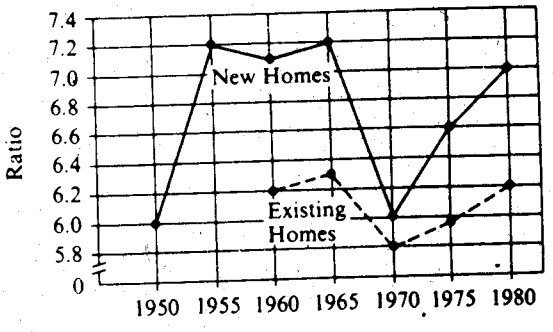
Questions 21-25 refer to the following graphs.

HOUSING PRICE AND FAMILY INCOME*



*median sale price and median family income

RATIO OF HOUSING PRICE TO PER CAPITA INCOME**



**Ratio = $\frac{\text{Housing Price (median sale price)}}{\text{Per Capita Income}}$

Note: Graphs drawn to scale.

21. Approximately what was the median sale price of an existing home in 1975?

(A) $15,000
(B) $35,000
(C) $36,000
(D) $38,000
(E) $40,000

22. In 1980, what was the approximate difference between the median sale price of an existing home and the median family income?

(A) $42,000
(B) $45,000
(C) $46,000
(D) $46,500
(E) $47,500

23. For which of the following years was the ratio of the median sale price of a new home minus the median sale price of an existing home to per capita income least?

(A) 1960
(B) 1965
(C) 1970
(D) 1975
(E) 1980

24. If in 1985 the per capita income was $7,200 and the ratio of the median sale price of an existing home to per capita income was the same as in 1980, what was the median sale price of an existing home in 1985?

(A) $50,040
(B) $44,640
(C) $11,600
(D) $5,040
(E) $1,160

25. By approximately what percent did the median sale price of a new home increase from 1955 to 1975?

(A) 26%
(B) $37\frac{1}{2}\%$
(C) $62\frac{1}{2}\%$
(D) 167%
(E) 267%

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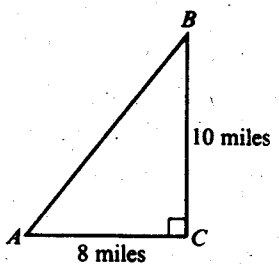


26. According to the figure above, traveling directly from point A to point B, rather than from point A to point C and then from point C to point B, would save approximately how many miles?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

27. 0.50% =

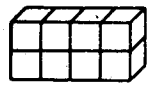
(A) $\frac{1}{500}$

(B) $\frac{1}{200}$

(C) $\frac{1}{50}$

(D) $\frac{1}{20}$

(E) $\frac{1}{2}$



28. The rectangular solid above is made up of eight cubes of the same size, each of which has exactly one face painted blue. What is the greatest fraction of the total surface area of the solid that could be blue?

(A) $\frac{1}{6}$

(B) $\frac{3}{14}$

(C) $\frac{1}{4}$

(D) $\frac{2}{7}$

(E) $\frac{1}{3}$

29. If $a > 0$, $b > 0$, and $c > 0$, $a + \frac{1}{b + \frac{1}{c}} =$

(A) $\frac{a + b}{c}$

(B) $\frac{ac + bc + 1}{c}$

(C) $\frac{abc + b + c}{bc}$

(D) $\frac{a + b + c}{abc + 1}$

(E) $\frac{abc + a + c}{bc + 1}$

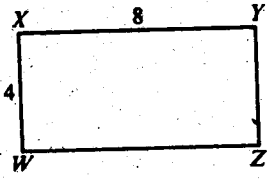
30. The buyer of a certain mechanical toy must choose 2 of 4 optional motions and 4 of 5 optional accessories. How many different combinations of motions and accessories are available to the buyer?

(A) 8
(B) 11
(C) 15
(D) 20
(E) 30

TEST 9 SECT 5

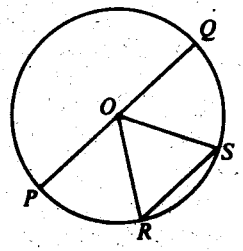
A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
	x and y are positive integers. $x > 1$ $y < 2$	
	x	$2y$
	$\frac{\frac{1}{r}}{\frac{1}{t}} = \frac{3}{5}$	
2.	$\frac{r}{t}$	$\frac{t}{r}$



13.	The area of a square region with a perimeter equal to the perimeter of rectangular region $WXYZ$	36

	Column A	Column B
	Among the 900 spectators at a football game, there was a total of x students from College C and a total of y students who were not from College C.	
14.	The number of spectators at the game who were not students	$900 - x - y$



O is the center of the circle, and $\angle ROS$ is a right angle.

15.	$\frac{PQ}{RS}$	$\frac{2}{1}$

GO ON TO THE NEXT PAGE.

Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. If $\frac{x}{2} + 1 = 15$, then $x =$

(A) 5
(B) 7
(C) 13
(D) 28
(E) 29

17. If 15 pies cost a total of \$11.50, then at this rate, what is the cost of 9 pies?

(A) \$6.75
(B) \$6.90
(C) \$7.50
(D) \$8.50
(E) \$9.45

18. If $2(x + y) = 5$, then, in terms of x, $y =$

(A) $\frac{5}{2} - x$

(B) $\frac{5}{2} + x$

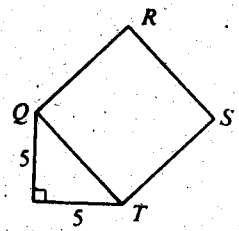
(C) $5 - 2x$

(D) $5 - \frac{x}{2}$

(E) $\frac{5}{2} + \frac{x}{2}$

19. If the average (arithmetic mean) of 16, 20, and n is between 18 and 21, inclusive, what is the greatest possible value of n?

(A) 18
(B) 21
(C) 27
(D) 54
(E) 63



20. In the figure above, what is the area of square $QRST$?

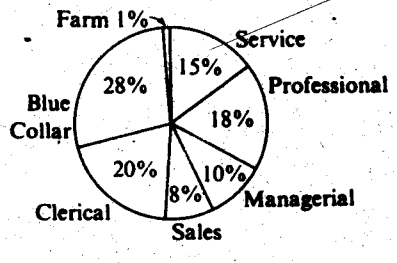
(A) 25
(B) $20\sqrt{2}$
(C) $25\sqrt{2}$
(D) 50
(E) $50\sqrt{2}$

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following graphs.

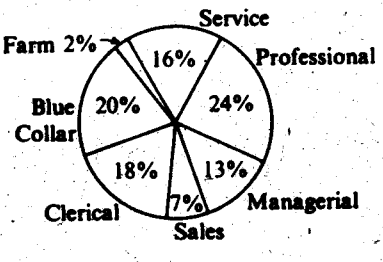
DISTRIBUTION OF WORK FORCE BY OCCUPATIONAL CATEGORY FOR COUNTRY *X* IN 1981 AND PROJECTED FOR 1995

Total Work Force: 150 Million



1981

Total Work Force: 175 Million



1995 (Projected)

21. In 1981, there were how many million Service workers in the work force?

(A) 15.0
(B) 20.5
(C) 22.5
(D) 28.0
(E) 175.0

22. In 1981, how many categories each comprised more than 25 million workers?

(A) One
(B) Two
(C) Three
(D) Four
(E) Five

23. What is the ratio of the number of workers in the Professional category in 1981 to the projected number of such workers in 1995?

(A) $\frac{4}{9}$
(B) $\frac{5}{14}$
(C) $\frac{9}{14}$
(D) $\frac{3}{4}$
(E) $\frac{14}{9}$

24. From 1981 to 1995, there is a projected increase in the number of workers in which of the following categories?

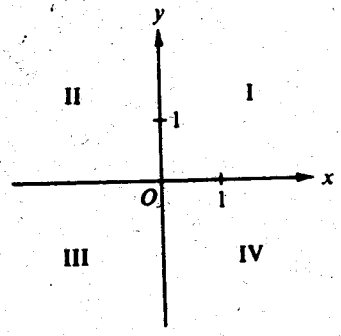
I. Sales
II. Service
III. Clerical

(A) None
(B) III only
(C) I and II only
(D) II and III only
(E) I, II, and III

25. Approximately what is the projected percent decrease in the number of Blue-Collar workers in the work force of Country *X* from 1981 to 1995?

(A) 42%
(B) 35%
(C) 20%
(D) 17%
(E) 7%

GO ON TO THE NEXT PAGE.

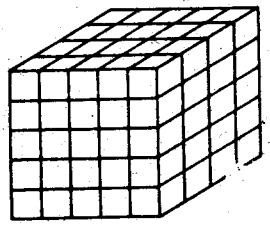


26. Points $(x, -3)$ and $(-2, y)$, not shown in the figure above, are in quadrants IV and II, respectively. If $xy \neq 0$, in which quadrant is point (x, y)?

(A) I
(B) II
(C) III
(D) IV
(E) It cannot be determined from the information given.

27. $(\sqrt{3} - \sqrt{2})^2 =$

(A) $1 - 2\sqrt{6}$
(B) $1 - \sqrt{6}$
(C) $5 - 2\sqrt{6}$
(D) $5 - 2\sqrt{3}$
(E) 1



28. If the figure above is a rectangular solid composed of cubes, each with edge of length 4 centimeters, what is the volume of the rectangular solid in cubic centimeters?

(A) 100
(B) 256
(C) 400
(D) 5,120
(E) 6,400

29. If $L = (a - b) - c$ and $R = a - (b - c)$, then $L - R =$

(A) $2b$
(B) $2c$
(C) 0
(D) $-2b$
(E) $-2c$

30. At the rate of 3,000 revolutions per minute, how many revolutions will a wheel make in k seconds?

(A) $3{,}000k$
(B) $50k$
(C) $\frac{50}{k}$
(D) $\frac{3{,}000}{k}$
(E) $\frac{180{,}000}{k}$

FOR GENERAL TEST 9 ONLY

Answer Key and Percentages* of Examinees Answering Each Question Correctly

VERBAL ABILITY					
Section 2			Section 4		
Number	Answer	P+	Number	Answer	P+
1	A	85	1	A	95
2	D	71	2	A	79
3	B	74	3	C	79
4	E	59	4	B	64
5	E	51	5	C	45
6	E	40	6	E	58
7	B	37	7	A	50
8	E	83	8	A	90
9	B	87	9	E	88
10	B	54	10	C	83
11	E	58	11	A	59
12	B	42	12	B	54
13	D	35	13	E	57
14	D	44	14	C	48
15	D	28	15	D	36
16	E	11	16	B	31
17	C	64	17	C	63
18	A	84	18	D	61
19	D	79	19	E	45
20	E	90	20	A	14
21	A	74	21	D	61
22	D	38	22	B	65
23	B	53	23	A	40
24	E	47	24	B	49
25	A	57	25	A	22
26	A	49	26	D	61
27	B	67	27	E	47
28	A	77	28	D	94
29	C	78	29	A	88
30	A	79	30	C	78
31	B	73	31	C	79
32	D	56	32	C	75
33	E	36	33	D	51
34	C	33	34	D	44
35	D	35	35	A	32
36	E	34	36	D	26
37	A	22	37	E	33
38	A	29	38	B	15

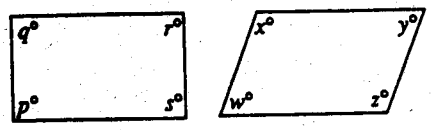
QUANTITATIVE ABILITY					
Section 3			Section 5		
Number	Answer	P+	Number	Answer	P+
1	C	88	1	B	81
2	B	83	2	C	85
3	B	81	3	B	81
4	A	84	4	B	81
5	A	87	5	A	89
6	A	71	6	A	87
7	B	74	7	C	87
8	A	76	8	D	68
9	A	77	9	A	72
10	D	59	10	B	65
11	D	52	11	D	87
12	C	44	12	A	63
13	D	50	13	C	50
14	C	33	14	C	49
15	D	29	15	B	30
16	C	88	16	D	85
17	A	78	17	B	77
18	A	64	18	A	74
19	E	64	19	C	71
20	C	64	20	D	57
21	D	87	21	C	79
22	A	83	22	C	75
23	C	63	23	C	40
24	B	59	24	E	42
25	D	38	25	D	35
26	E	52	26	A	53
27	B	48	27	C	39
28	D	43	28	E	52
29	E	33	29	E	32
30	E	28	30	B	49

ANALYTICAL ABILITY					
Section 1			Section 6		
Number	Answer	P+	Number	Answer	P+
1	C	76	1	B	81
2	B	78	2	D	74
3	D	60	3	C	86
4	C	51	4	E	69
5	D	56	5	E	78
6	A	28	6	C	87
7	D	93	7	C	65
8	D	62	8	E	77
9	A	45	9	D	79
10	A	91	10	C	47
11	E	65	11	A	88
12	E	29	12	E	66
13	D	28	13	B	64
14	D	54	14	A	37
15	C	64	15	D	62
16	B	44	16	B	38
17	E	16	17	B	46
18	A	62	18	A	13
19	B	56	19	D	51
20	D	49	20	C	61
21	B	56	21	E	35
22	E	31	22	C	51
23	E	50	23	E	44
24	D	40	24	B	33
25	E	42	25	A	31

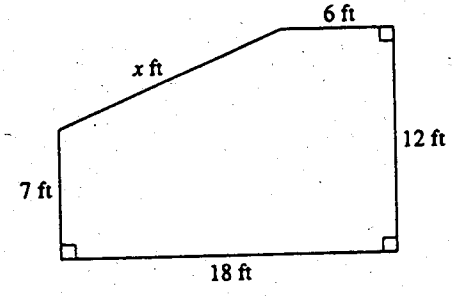
*Estimated P+ for the group of examinees who took the GRE General Test in a recent three-year period.

Test 10 set-3

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
	On map X each centimeter represents 20 kilometers.	
1.	The actual distance, in kilometers, between two locations that are 17 centimeters apart on map X	300
2.	 $p + q + r + s$	$w + x + y + z$
3.	$\frac{54}{75}$	$\frac{4}{7}$
4.	$\frac{\sqrt{3}}{3}$	$\frac{\sqrt{1}}{1}$
5.	$4r + t = 10$	

	Column A	Column B
6.	$\frac{7^{10}}{7^5}$	$\frac{7^{11}}{7^6}$
	The ratio of the length of a side of square S to the length of a side of equilateral triangle T is 4 to 5.	
7.	The perimeter of S	The perimeter of T
	$m + \frac{1}{2} = \frac{1}{3}$	
8.	m	$\frac{1}{6}$
9.	$(\sqrt{0.5})^4$	0.5



The figure shows the dimensions of a certain plot of land.

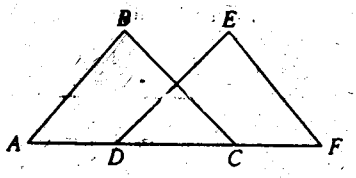
10.	x	12

GO ON TO THE NEXT PAGE.

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
	$(x - 3)(x + 2) = 0$	
11.	x	2

	Column A	Column B
	Pencils have the same unit cost regardless of the number sold. x pencils cost a total of \$0.50 and n pencils cost a total of y dollars.	
14.	n	$2xy$

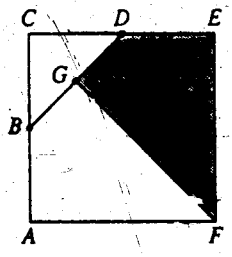


$\triangle ABC$ and $\triangle DEF$ have the same area.
$AD > CF$

	Column A	Column B
12.	The altitude of $\triangle ABC$ from B to AC	The altitude of $\triangle DEF$ from E to DF

$x > 1$

	Column A	Column B
13.	$\frac{x^3}{3}$	$\frac{x^2}{2}$

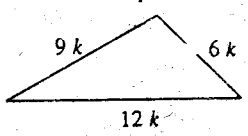


$ACEF$ is a square region and B, D, and G are midpoints of AC, CE, and BD, respectively.

	Column A	Column B
15.	The fraction of $ACEF$ that is shaded	$\frac{7}{16}$

GO ON TO THE NEXT PAGE.

Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.



16. If the length of the longest side of the triangle shown above is 36, what is the perimeter of the triangle?

(A) 51
(B) 63
(C) 81
(D) 108
(E) 162

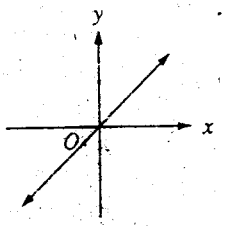
17. If $\frac{5}{8} = \frac{3}{x}$ and $y = \frac{1}{5}$, what is the value of $x + 6y$?

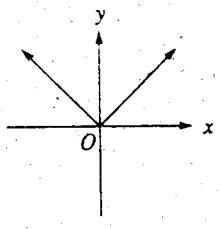
(A) $\frac{41}{30}$
(B) 2
(C) $\frac{16}{5}$
(D) 6
(E) $\frac{203}{15}$

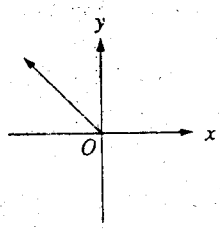
18. The daily rate for a hotel room that sleeps 4 people is \$39 for one person and x dollars for each additional person. If 3 people take the room for one day and each pays \$21 for the room, what is the value of x?

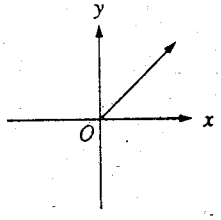
(A) 6
(B) 8
(C) 12
(D) 13
(E) 24

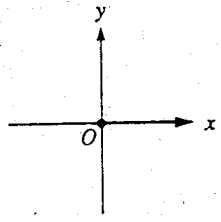
19. Which of the following is the graph of the equation $y = |x|$ for all real values of x? (Note: All graphs drawn to scale.)

(A)


(B)


(C)


(D)


(E)


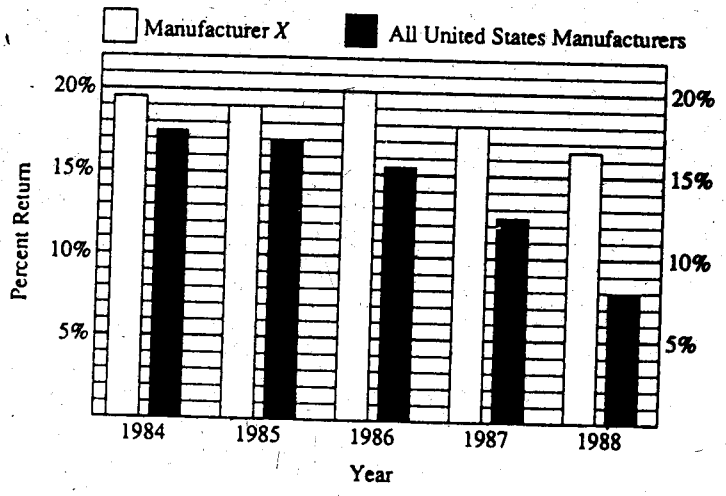
20. The average (arithmetic mean) of a set of 12 numbers, which includes 34, is N. If 34 is removed from the set and 38 is added to the set, what is the average of the new set of numbers, in terms of N?

(A) $N + \frac{1}{3}$
(B) $N + \frac{19}{6}$
(C) $N + 4$
(D) $N + 6$
(E) $12N + 4$

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following graph.

PERCENT RETURN ON SHAREHOLDERS' EQUITY
MANUFACTURER *X VERSUS* ALL UNITED STATES MANUFACTURERS



Note: Graph drawn to scale.

21. If shareholders in Manufacturer X had $100 million in equity in 1987, then the dollar amount of the shareholders' return on this equity was

(A) $82.0 million
(B) $18.0 million
(C) $15.5 million
(D) $12.5 million
(E) $1.85 million

22. In 1986 Manufacturer X's return per dollar of shareholders' equity was approximately how much greater than that of all United States manufacturers?

(A) $0.01
(B) $0.02
(C) $0.025
(D) $0.035
(E) $0.045

23. The decrease in percent return on shareholders' equity for all United States manufacturers from 1987 to 1988 was approximately how many times the decrease in percent return on shareholders' equity for all United States manufacturers from 1985 to 1986?

(A) 9
(B) 6
(C) 4.5
(D) 3
(E) 1.5

24. For the year shown, other than 1987, in which the percent return on shareholders' equity for Manufacturer X was most nearly equal to that for 1987, what was the percent return for all United States manufacturers?

(A) 8%
(B) $12\frac{1}{2}\%$
(C) $15\frac{1}{2}\%$
(D) 17%
(E) $17\frac{1}{2}\%$

25. Which of the following statements can be supported by the data in the graph?

I. The percent return on shareholders' equity for all United States manufacturers decreased from 1984 to 1988 by less than 10 percentage points.
II. A return on shareholders' equity of more than 7 percent was achieved by each United States manufacturer in 1988.
III. The shareholders' equity for Manufacturer X was greater in 1987 than in 1988.

(A) I only
(B) III only
(C) I and II only
(D) II and III only
(E) I, II, and III

GO ON TO THE NEXT PAGE.

26. Which of the following inequalities is true?

(A) $0 < \frac{1}{10} < 0.01$

(B) $0.12 < \frac{1}{8} < 0.13$

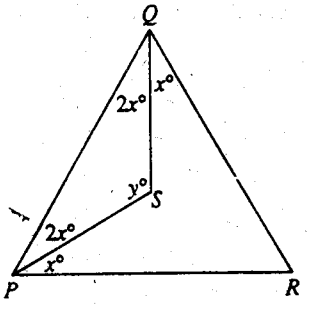
(C) $0.30 < \frac{1}{4} < 0.50$

(D) $0.30 < \frac{1}{3} < 0.33$

(E) $1.35 < \frac{6}{5} < 1.56$

27. If a person can save \$380 in 5 weeks, in how many weeks, at this same rate, can the person save 2.6 times this amount?

(A) 13
(B) 12.5
(C) 11
(D) 10.6
(E) 8



28. In the figure above, if the measure of $\angle R$ is 30°, then $y =$

(A) 60
(B) 80
(C) 100
(D) 120
(E) 140

29. A positive integer with exactly two different divisors greater than 1 must be

(A) a prime
(B) an even integer
(C) a multiple of 3
(D) the square of a prime
(E) the square of an odd integer

30. The expression $\frac{1+\sqrt{2}}{1-\sqrt{2}}$ is equivalent to which of the following?

(A) $1 + \frac{2}{3}\sqrt{2}$

(B) $-1 - \frac{2}{3}\sqrt{2}$

(C) -1

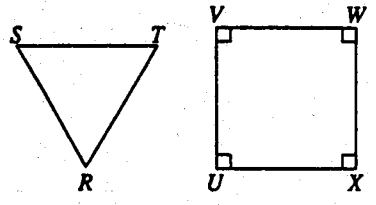
(D) $3 + 2\sqrt{2}$

(E) $-3 - 2\sqrt{2}$

TEST 10 SECT 7

A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

	Column A	Column B
1.	$\dfrac{5-\frac{1}{10}}{10+\frac{1}{10}}$	$\frac{1}{2}$



$RS = ST = TR = UV = VW = WX = XU$

2.	The area of region RST	The area of region $UVWX$

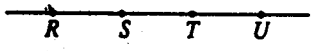
A car traveling at a constant speed of 50 miles per hour uses k gallons of fuel each hour.

3.	The number of gallons of fuel this car uses to travel 200 miles at a constant speed of 50 miles per hour	$4k$

$$\frac{1}{10} \times N = 1$$

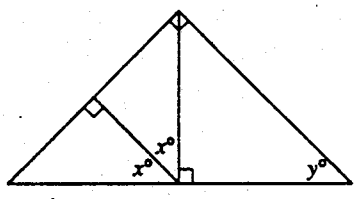
$$\frac{1}{10} + R = 1$$

4.	N	R



5.	RT	SU

	Column A	Column B
	$4t + 5 = 5t - 30$	
6.	t	30



7.	x	y

8.	$(0.3)^2$	$\left(\frac{1}{2}\right)^2\left(\frac{1}{5}\right)^2(3)^2$

$$|n| = 61$$
$$|n - 1| = 62$$

9.	n	61

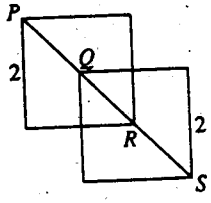
Of the 7 members of the city council, 4 are Democrats and 3 are Republicans. T is the total number of different 3-person committees that can be appointed from the council membership such that each committee consists of 2 Democrats and 1 Republican.

10.	T	15

GO ON TO THE NEXT PAGE.

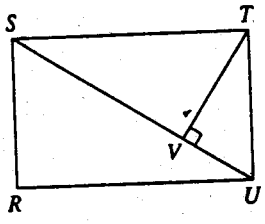
A if the quantity in Column A is greater;
B if the quantity in Column B is greater;
C if the two quantities are equal;
D if the relationship cannot be determined from the information given.

Column A	Column B
The average (arithmetic mean) of k numbers is 27, and k is greater than 10.	
11. The sum of the k numbers	300

Column A	Column B
 Q and R are the centers of the two squares with sides of length 2.	
12. The length of line segment PS	$3\sqrt{2}$

Column A	Column B
32 percent of x is 75. x is k percent of 75.	
13. k	300

Column A	Column B
$xy = 6$ $x^2 = 9$	
14. x	y

Column A	Column B
	
15. The area of rectangular region $RSTU$	$(TV)(SU)$

GO ON TO THE NEXT PAGE.

Directions: Each of the Questions 16-30 has five answer choices. For each of these questions, select the best of the answer choices given.

16. A buzzer sounds every 15 minutes. If the buzzer sounded at 12:40, which of the following could be a time at which the buzzer sounded?

(A) 4:05
(B) 5:30
(C) 6:45
(D) 7:15
(E) 8:10

17. $\frac{1}{32} + \frac{1}{32} + \frac{1}{16} + \frac{1}{8} + \frac{1}{4} + \frac{1}{2} =$

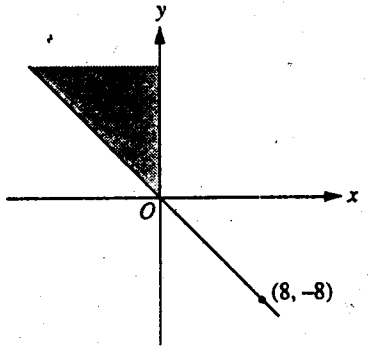
(A) $\frac{3}{4}$

(B) $\frac{15}{16}$

(C) $\frac{31}{32}$

(D) 1

(E) $\frac{3}{2}$



18. Of the following pairs of coordinates, which represents a point in the shaded region on the graph shown above?

(A) $(3, -5)$
(B) $(-3, -5)$
(C) $(-3, 5)$
(D) $(-5, 3)$
(E) $(-5, -3)$

19. If $x = 2w$, $z = 3x$, and $wz \neq 0$, what is the value of $\frac{x^2}{wz}$?

(A) $\frac{2}{3}$

(B) 1

(C) $\frac{4}{3}$

(D) 4

(E) 6

20. If $x \geq 8$ and $y \leq 3$, then it must be true that

(A) $x + y \geq 5$
(B) $x + y \leq 11$
(C) $x - y \geq 5$
(D) $x - y \leq 5$
(E) $x - y \leq 11$

GO ON TO THE NEXT PAGE.

Questions 21-25 refer to the following chart.

ENROLLMENT, FACULTY SIZE, FACULTY SALARY, AND TUITION AT COLLEGE *R* FOR SELECTED YEARS

	1960	1970	1980
Number of Students Enrolled	1,490	1,600	1,790
Number of Faculty Members	166	160	—
Ratio of Students to Faculty	—	$\frac{10}{1}$	$\frac{11}{1}$
Average* Faculty Salary	—	$14,360	$28,400
Tuition per Student	$1,400	$2,000	$3,700
Total Faculty Salaries	$1,245,000	—	$4,629,200
Income from Tuition	$2,086,000	$3,200,000	—

*Arithmetic mean

21. What was the total amount of faculty salaries at College *R* in 1970?

(A) $143,600
(B) $200,600
(C) $256,000
(D) $2,045,000
(E) $2,297,600

22. The number of students enrolled in 1960 was approximately what fraction of the number enrolled in 1980?

(A) $\frac{8}{9}$
(B) $\frac{5}{6}$
(C) $\frac{2}{3}$
(D) $\frac{1}{3}$
(E) $\frac{1}{5}$

GO ON TO THE NEXT PAGE.

23. If the increase in the number of students enrolled from 1950 to 1960 was half the increase from 1960 to 1970, what was the student enrollment in 1950?

(A) 745
(B) 1,340
(C) 1,380
(D) 1,435
(E) 1,545

24. The increase in tuition per student from 1970 to 1980 was approximately how many times as great as the increase from 1960 to 1970?

(A) 2
(B) $2\frac{1}{2}$
(C) 3
(D) $3\frac{1}{2}$
(E) 4

25. If the total amount of faculty salaries in 1980 was paid from tuition income, approximately how much of each student's tuition was used to pay faculty salaries?

(A) \$160
(B) \$1,100
(C) \$1,250
(D) \$2,600
(E) \$3,700

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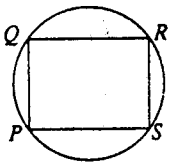


26. In the figure above, rectangle $PQRS$ is inscribed in the circle and $PQ = 6$. If the area of rectangular region $PQRS$ is 48, what is the area of the circular region?

(A) 10π
(B) 25π
(C) 36π
(D) 48π
(E) 100π

27. The expression $\dfrac{\frac{1}{n}}{1 - \frac{1}{n}}$, where n is not equal to 0 or 1, is equivalent to which of the following?

(A) $\dfrac{1}{n - 1}$

(B) $\dfrac{1}{1 - n}$

(C) $n - 1$

(D) $\dfrac{n}{n - 1}$

(E) $\dfrac{n}{1 - n}$

28. A cyclist travels x miles in w hours and z minutes. What is the cyclist's speed in miles per hour?

(A) $\dfrac{x}{w + 60z}$

(B) $\dfrac{60w + z}{x}$

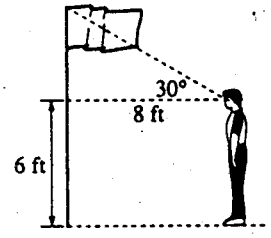
(C) $\dfrac{60x}{w + z}$

(D) $\dfrac{w + z}{x}$

(E) $\dfrac{60x}{60w + z}$

29. $3^{20} + 3^{20} + 3^{20} =$

(A) 9^{60}
(B) 9^{20}
(C) 3^{60}
(D) 3^{23}
(E) 3^{21}



30. In the figure above, a student whose eyes are 6 feet above the ground and 8 feet from a vertical flagpole views the top of the flagpole at a 30-degree angle of elevation. What is the height, in feet, of the flagpole?

(A) $6 + 8\sqrt{3}$

(B) 14

(C) $\dfrac{16}{\sqrt{3}}$

(D) $6 + \dfrac{8}{\sqrt{3}}$

(E) 10

FOR GENERAL TEST 10 ONLY

Answer Key and Percentages* of Examinees Answering Each Question Correctly

VERBAL ABILITY					
Section 1			Section 4		
Number	Answer	P+	Number	Answer	P+
1	E	94	1	A	93
2	D	88	2	A	88
3	C	82	3	B	86
4	C	80	4	E	95
5	B	71	5	B	85
6	A	59	6	E	75
7	D	38	7	A	51
8	B	88	8	C	89
9	C	85	9	E	87
10	E	81	10	C	74
11	D	71	11	D	68
12	E	48	12	D	73
13	A	48	13	A	45
14	E	43	14	D	39
15	E	34	15	D	28
16	D	30	16	E	21
17	E	74	17	B	56
18	D	71	18	B	76
19	E	65	19	D	82
20	A	71	20	A	51
21	E	40	21	B	65
22	B	30	22	B	35
23	C	31	23	E	51
24	D	58	24	C	76
25	C	50	25	A	50
26	B	26	26	A	84
27	C	45	27	B	60
28	E	84	28	D	91
29	B	82	29	D	77
30	A	72	30	A	90
31	C	64	31	E	53
32	C	51	32	E	40
33	D	41	33	B	42
34	A	38	34	D	42
35	D	34	35	D	33
36	B	31	36	C	35
37	E	25	37	A	33
38	A	19	38	C	23

QUANTITATIVE ABILITY					
Section 3			Section 7		
Number	Answer	P+	Number	Answer	P+
1	A	85	1	B	70
2	C	88	2	B	87
3	A	74	3	C	82
4	B	72	4	A	75
5	D	76	5	D	79
6	C	70	6	A	78
7	A	73	7	C	75
8	B	78	8	C	53
9	B	66	9	B	57
10	A	66	10	A	49
11	D	55	11	D	58
12	B	38	12	C	49
13	D	25	13	A	33
14	C	32	14	D	36
15	C	39	15	C	33
16	C	68	16	E	85
17	C	70	17	D	89
18	C	66	18	C	79
19	B	60	19	A	83
20	A	50	20	C	53
21	B	87	21	E	75
22	E	75	22	B	67
23	D	64	23	D	71
24	D	50	24	C	58
25	A	25	25	D	43
26	B	64	26	B	43
27	A	61	27	A	42
28	B	44	28	E	33
29	D	26	29	E	20
30	E	26	30	D	32

ANALYTICAL ABILITY					
Section 2			Section 6		
Number	Answer	P+	Number	Answer	P+
1	D	93	1	D	79
2	C	47	2	A	77
3	B	[illegible]	3	D	64
4	D	[illegible]	4	E	68
5	C	[illegible]	5	B	59
6	A	[illegible]	6	B	69
7	D	66	7	C	70
8	E	79	8	D	80
9	B	66	9	A	86
10	B	74	10	E	63
11	A	70	11	B	88
12	C	32	12	A	72
13	A	61	13	C	57
14	E	46	14	D	56
15	A	50	15	D	38
16	A	41	16	E	26
17	D	47	17	E	54
18	A	39	18	B	52
19	A	32	19	C	50
20	E	23	20	B	52
21	D	42	21	D	31
22	E	32	22	E	33
23	B	68	23	E	45
24	D	63	24	A	18
25	B	51	25	A	55

*Estimated P+ for the group of examinees who took the GRE General Test in a recent three-year period.